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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Docket Number (Optional)

2002\_0188A

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on \_\_\_\_\_

Signature \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Application Number

10/092,548

Filed

March 8, 2002

First Named Inventor

Junichi KIMURA

Art Unit

2814

Examiner

Nathan W. Ha

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).  
Note: No more than five (5) pages may be provided.

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ACCOUNT NO. 23-0975

I am the

☐ applicant/inventor.  
☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)

☒ attorney or agent of record.  
Registration number 44,142

☐ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

Signature

W. Douglas Hahm

Typed or printed name

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Telephone number

February 8, 2006

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☐ \*Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Junichi KIMURA

Serial No. 10/092,548

Filed March 8, 2002

MULTI-LAYER BOARD



: **Confirmation No. 8800**

: Attorney Docket No. 2002\_0188A

: Group Art Unit 2814

: Examiner Nathan W. Ha

: **Mail Stop: AF**

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**REMARKS IN SUPPORT OF PRE-APPEAL BRIEF**  
**REQUEST FOR REVIEW**

Commissioner for Patents  
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Sir:

Further to the Notice of Appeal and Pre-Appeal Brief Request for Review submitted  
herewith, kindly consider the following Remarks.

## **REMARKS**

In the Advisory Action dated January 20, 2006, the Examiner maintained the prior art rejections of pending claims 18, 19, 21-26, 28-30, 32-45, 47, and 49-51. In particular, the Examiner rejected each of independent claims 18 and 32 as being anticipated by the Yamada reference (US 6,570,469). The Examiner also rejected all of the dependent claims as being anticipated by the Yamada reference, with the exception of dependent claim 50, which the Examiner rejected as being obvious in view of the Yamada reference in combination with the Takaya reference (US 6,908,960). However, as will be explained in more detail below, the prior art references applied by the Examiner do not teach or even suggest all of the elements recited in each of the pending claims. Consequently, it is respectfully submitted that the Examiner has not established a *prima facie* case of obviousness, and the presently-pending claims are therefore clearly patentable over the prior art of record.

### **Independent Claim 18**

Presently pending independent claim 18 includes the following features:

- (1) a ceramic layer;
- (2) a first resin layer on the first side of the ceramic layer so as to contact the ceramic layer;
- (3) a third resin layer on the first resin layer *so as to contact the first resin layer*; and
- (4) a strip line *between the first resin layer and the third resin layer*.

In the remarks submitted with the Amendment filed June 23, 2005 and again in the Request for Reconsideration filed December 9, 2005, the Applicant asserted that the Yamada reference does not disclose or even suggest a strip line *between the first resin layer and the third resin layer*, as recited in claim 18 (identified as item 4 in the list of features provided above). Despite this assertion, the Examiner maintained the prior art rejections in the final Office Action of August 9, 2005 and again in the Advisory Action, and asserted that the applied prior art does teach a strip line arranged as recited in claim 18. However, it is respectfully submitted that the Examiner's position is unsupported, as explained below.

For illustrative purposes, an enlarged copy of Figure 4 from the Yamada reference has been prepared and attached hereto as an Appendix. In the Appendix, the various items shown in the drawing have been labeled according to the Examiner's interpretation as set forth in the final Office Action and the Advisory Action.

In line 5 on page 3 of the final Office Action, the Examiner stated that the Yamada reference teaches a strip line 2 (identified with adjacent stars in the Appendix) formed between a first resin layer (identified as top layer 17 by the Examiner) and a third resin layer (identified as sealing resin 6 by the Examiner). In the Advisory Action, the Examiner noted that there "are several strip lines that are disclosed in fig. 4 of Yamada," such as the lines formed in layer 19. However, as indicated in the enlarged Appendix version of Fig. 4, neither the strip line 2, the patterned inductor 12 (initially identified as the impedance element of claim 18 by the Examiner), or any of the other "strip lines" shown in Fig. 4 are arranged *between* a first resin layer (such as top layer 17) and a third resin layer (such as sealing resin 6). In this regard, it is noted that layers 15, 16, and 19 of Fig. 4 are *ceramic* layers, rather than *resin* layers.

The Examiner appears to be identifying individual components of the prior art as corresponding to the elements recited in claim 18, without regard to how those components are actually arranged. Despite the Examiner's assertions to the contrary, the Yamada reference (Fig. 4 of the Yamada reference, in particular) does not teach or suggest *any* strip line formed between a first resin layer and a third resin layer. Moreover, the Yamada reference does not teach or suggest any strip line formed between a first resin layer and a third resin layer, wherein the third resin layer is *on the first resin layer so as to contact the first resin layer*.

As explained above, the Yamada reference does not disclose or even suggest the combination of four elements enumerated above, which are recited in independent claim 18. Therefore, it is respectfully submitted that the Yamada reference does not anticipate or even render obvious the invention recited in independent claim 18. Moreover, because the Takaya reference also does not disclose or suggest the strip line arranged as recited in claim 18, it is submitted that claim 18 and the claims that depend therefrom are clearly patentable over the prior art of record.

### **Independent Claim 32**

Independent claim 32 includes the following features:

- (1) a ceramic layer;
- (2) an impedance element including a patterned inductor on the ceramic layer;
- (3) a resin layer over the first side of the ceramic layer, and the resin layer having a first side facing the first side of the ceramic layer and having a second side opposite the first side of the resin layer;
- (4) a ground pattern on the second side of the resin layer (i.e., the side opposite the ceramic layer); and
- (5) the ground pattern and the patterned inductor are arranged *so that no portion of the ground pattern is located on a portion of the second side of the resin layer opposite a portion of the first side of the resin layer facing the patterned inductor.*

In lines 3-5 on page 4 of the final Office Action, the Examiner appeared to identify the land grid array 7 of the Yamada reference as corresponding to the ground pattern, but did not explain how the Yamada reference teaches the relationship between the ground pattern and the patterned inductor as recited in independent claim 32 (item 5 of the claim as set forth above). In the Advisory Action, the Examiner acknowledged the relationship between the ground pattern and the patterned inductor as recited in claim 32, but asserted that it is “clear that there is no portion of element 7 is even near the element 7 as submitted by the Applicant.” Despite this assertion, the Examiner still has not clearly explained how the Yamada reference teaches the relationship between the ground pattern and the patterned inductor recited in claim 32. In fact, as explained below, there is no such teaching.

Firstly, the Yamada reference does not teach which, *if any*, of the electrodes 7 is a ground. Thus, it is submitted that the Yamada reference therefore cannot possibly teach any specific relationship between a patterned inductor and a ground pattern.

However, assuming that an electrode of the land grid array 7 of the Yamada reference *is* a ground pattern as suggested by the Examiner, and that the circuit pattern 12 of the Yamada reference *is* an impedance element as suggested by the Examiner, then Fig. 4 clearly illustrates

that a **large** portion (as opposed to **no** portion as recited in claim 18), and arguably the **entire** portion, of the "ground pattern" 7 is located on a portion of the second side of resin layer 17 opposite a portion of the first side of resin layer 17 which faces the "patterned inductor" (circuit pattern 12). Thus, it is clear that the Yamada reference does not disclose or even suggest the structural relationship between the ground pattern and the patterned inductor as recited in independent claim 32. Accordingly, it is respectfully submitted that the Yamada reference does not anticipate or even suggest the invention recited in claim 32. Moreover, because the Takaya reference also does not disclose or suggest the structural relationship between the ground pattern and the patterned inductor as recited in independent claim 32, it is respectfully submitted that independent claim 32 and the claims that depend therefrom are clearly patentable over the prior art of record.

### **Conclusion**

As explained above, the prior art applied by the Examiner does not teach or even suggest all of the elements recited in each of independent claims 18 and 32. Therefore, it is respectfully submitted that the present application is now in condition for allowance, and that a Notice of Allowance be issued in this application.

Respectfully submitted,

Junichi KIMURA

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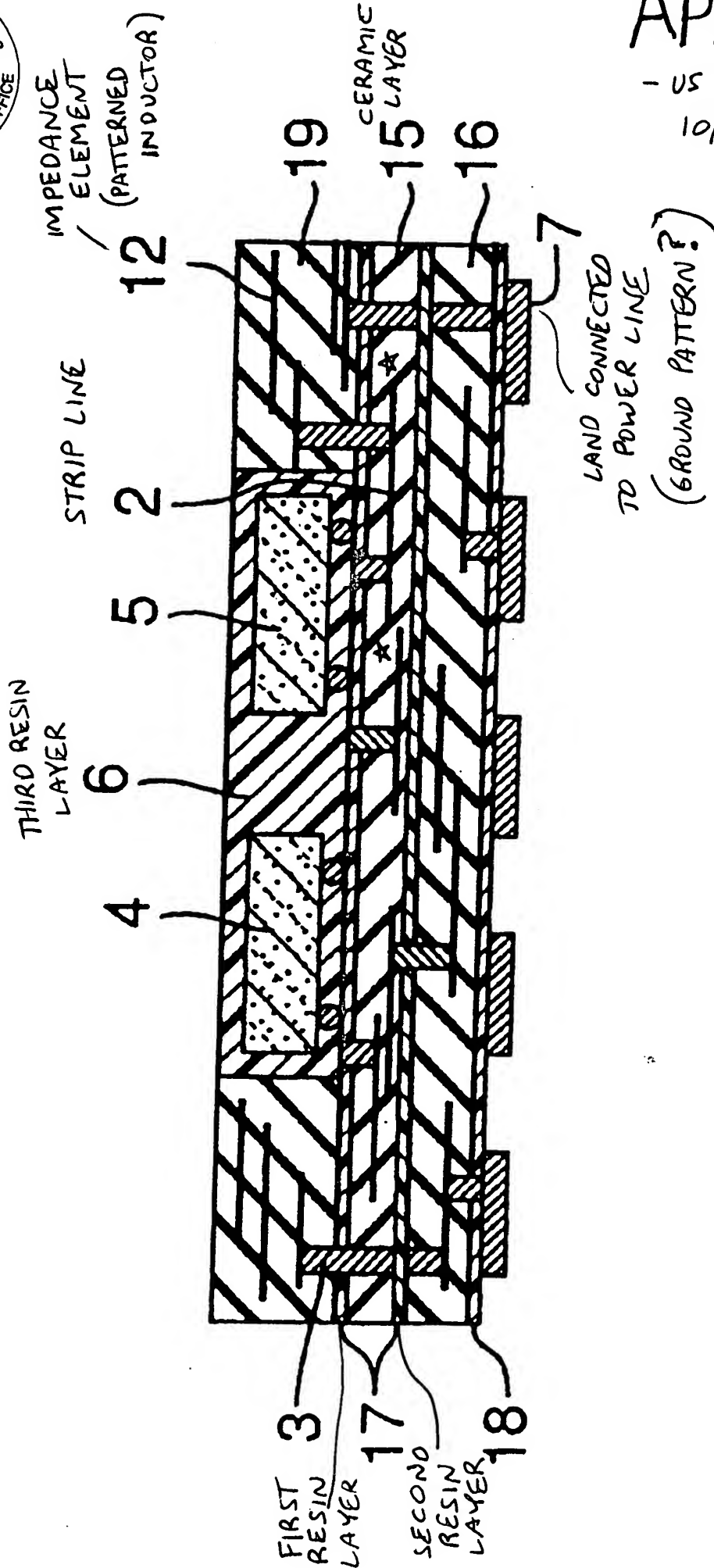
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February 8, 2006

NOTE: THIS IS NOT A PROPOSED OR ACTUAL  
AMENDED DRAWING



US PATENT NO. 6,570,469  
(YAMADA REFERENCE)

Fig. 4



APPENDIX

- US APPLICATION  
10/092,548